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TP 1624

Marine Casualty Investigations

Enquêtes sur les accidents maritimes

Investigation Report to the Minister pursuant to sections 542 or 545 of the Canada Shipping Act

Rapport d'investigation au Ministre conformément aux articles 542 ou 545 de la Loi sur la marine marchande du Canada

Canada

Ce rapport est aussi disponible en français

REPORT OF INVESTIGATION INTO THE CIRCUMSTANCES ATTENDING THE LOSS OF THE SMALL CANADIAN FISHING VESSEL "NATALIE", TOGETHER WITH THE PRESUMED DEATHS OF HER THREE CREW MEMBERS, OFF WEST DOVER, N.S., NOVEMBER 21, 1987

REPORT No. 501

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Particulars of Vessel

Name	"NATALIE"
Official Number	326092
Port of Registry	Halifax, N.S.
Gross Tonnage	4.69
Net Tonnage	4.03
Length	7.9 m
Breadth	2.44 m
Depth	1.22 m
Approximate Draught (at time of incident)	0.30 m
Type	Wooden, open, inshore fishing boat.
Built	1966, Mader's Cove, N.S.
Propulsion	140 b.h.p., gasoline engine, single screw
Auxiliary Propulsion	2 oars
Cargo	Nil
Crew	3
Owner/Operator	Elwood Harrington Berringer, Middle Village, N.S.

Navigation Equipment

Compass	Magnetic

Life-saving Appliances

Lifejackets	4 or 5, Department of

	Transport approved keyhole type.
Distress flares	unknown quantity and type.

Communication Equipment

Nil

Description of Vessel

The "NATALIE" was a small open wooden boat of the type used for fishing in the sheltered waters of the many harbours and bays that form the coast of Nova Scotia.

Wooden floorboards were fitted, but not secured, throughout her length which gave an inside height to the top of the gunwales of 0.92 m, measured from the top of the floorboards.

A small wheel-house was fitted above the floorboards, situated approximately amidships, which contained the steering wheel, the compass and the life-saving appliances.

The oars and a boat hook were stowed, but not secured, on the deck formed by the floorboards.

The engine was protected by a wooden box cover 1 m in length.

The "NATALIE", although registered as a fishing vessel, was not inspected by the Ship Safety Branch of the Canadian Coast Guard as her gross tonnage was below the mandatory 15.0 tons.

NOTE: 1. All times mentioned in this report are expressed in Atlantic Standard Time (UTC minus 4 hours)

Background

The "NATALIE" departed her berth at Middle Village, West Dover, during the morning of Saturday, November 21, 1987, for the entrance to Port Dover, some 2 miles distant, to retrieve fishing nets which had been set the previous summer.

There were three persons on board who were all related and they were accompanied by the family pet dog.

Some 4 hours later it was realized by persons ashore

that the vessel's return was overdue and a search was undertaken by local fisherman. The Canadian Coast Guard was also alerted and full Search and Rescue procedures were initiated in conjunction with the fishermen.

Wreckage identified as having formed parts of the structure of the "NATALIE" and one of her oars were found; however, at the time of writing this report, none of the occupants had been found and are considered to be missing presumed drowned. The casualty is considered to have occurred in position approximate 44°29.0'N, 63°51.3'W.

Pollution was minimal as a result of the casualty consisting of leaked gasoline fuel.

Particulars of Missing Persons

Name	Stanley Wakefield Berringer
Position aboard vessel	Operator
Age	86 years
Address	West Dover, N.S.
Name	Clifford Stanley Berringer
Position aboard vessel	Deck-hand
Age	55 years
Address	West Dover N.S.
Name	Elwood Harrington Berringer
Position aboard vessel	Deck-hand
Age	50 years
Address	West Dover, N.S.

Narrative

West Dover and Middle Village are two small fishing communities situated on a bay known as Port Dover. (See copy of a section of Canadian Hydrographic Services chart No. 4386.) Middle Village and West Dover are both referred to

locally as West Dover with regard to the operation of fishing boats and all are considered to be based at West Dover.

The section of Middle Village in which the three Berringer families live consists of a promontory on which their houses are situated, one of the houses belonged to the elder Berringer, the others to his two sons. A small fish shed with a private wharf, which was the permanent berth, of the "NATALIE" is situated at the tip of the promontory at the shore line.

The "NATALIE" had been owned and operated for many years by the elder Berringer, Stanley, and since their childhood, his two sons, Elwood and Clifford, had assisted him whenever possible. The two sons each held permanent employment at occupations other than fishing, consequently their assistance depended upon the times when they were not occupied at that employment.

The ownership of the "NATALIE" had been passed to Elwood some years ago but the senior Berringer was still considered by the family to be the operator of the boat and business.

As was usual, fishing nets (gill) had been set during the summer near shoals outside of the entrance to the harbour. The pre-Christmas lobster fishing season was due to open on November 30, therefore the gill net fishing was to be stopped, the nets retrieved and brought ashore for overhaul and, if necessary, repair.

A storm causing easterly to south-easterly winds of 30 to 40 knots had passed south of the area during Friday, November 20, and, although on Saturday, November 21, the weather had considerably moderated, the residual wave action from the storm caused the seas outside of the inner harbour to be rough and confused as they washed among the many rocks and shoals.

At 0700 on Saturday, November 21, Elwood Berringer remarked to his wife that he, his brother and father intended to retrieve the nets that day. It was not possible from the sheltered inner harbour to gauge the state of the sea outside of the harbour, therefore, they intended to take the "NATALIE" out towards the entrance and if the seas proved to be too rough then to return. He also telephoned a cousin who lived some 5 miles away and who had a clear view of the ocean in order to get his opinion of the sea state, the cousin thought the sea to be moderate.

At approximately 0830, the "NATALIE" departed from her berth at Middle Village and a few minutes later was observed

by other local fishermen, who were tending to their boats and gear at West Dover, to be proceeding towards the harbour entrance. The weather at that time was observed by them to be, winds east-north-east 5 knots with very good visibility and the harbour waters calm; however, mild concern was felt for the safety of the "NATALIE" as it was known by them that the seas outside of the harbour would still be rough. No other fishermen intended to leave the harbour that day.

Although the boat was seen neither the people nor the dog could be seen on board, and it was assumed that they were all in the wheel-house.

At approximately 1300, one of the fishermen became more concerned; the "NATALIE" had not returned and he knew that under normal circumstances the retrieval of nets should not have taken more than 2 hours. He drove some 5.5 km to the community of East Dover from where there was a clear view of the area in which the nets had been set; he saw that the seas were rough and there was no sign of the "NATALIE". On returning to West Dover at 1330 he voiced his concern to other fishermen and those who owned larger and more sea-capable boats proceeded to search for the "NATALIE" but without success.

At 1400 it was decided to call Halifax Coast Guard Radio Station (VCS) who in turn advised the Canadian Coast Guard (CCG) and the Rescue Co-ordination Centre (RCC) at Halifax, N.S., who immediately implemented Search and Rescue (SAR) procedures.

Various pieces of wreckage consisting of parts of the vessel's structure and equipment were found throughout the search but none of the occupants were recovered and, at 2040 November 23 (sunset), the search was placed on reduced status and the three persons on board were classed as missing persons.

Analysis

1. Structural condition of the "NATALIE"

The "NATALIE" was of less than 15 tons gross tonnage and therefore not required by regulation to be inspected by the Ship Safety Branch of the CCG; consequently, she was not inspected by them. Also, there are no records of inspections having been carried out for insurance purposes and therefore the condition of the vessel cannot be ascertained.

She was built in 1966 and, though 21 years old, was reportedly in good condition having been carefully maintained both mechanically and structurally.

2. **Health of the crew**

All of the crew were apparently in good health and well rested; although the elder Berringer was nearing his 87th year, he was considered by other local fishermen to have the equivalent health standard of an athletic 60 year old.

3. **Pet dog**

It was reportedly quite usual for the dog to accompany the three adult members of the family on fishing-related trips; he was a big dog described as a Labrador Retriever type and reportedly was well behaved when on board.

4. **Crew experience and qualifications**

The elder Berringer had been fishing in similar types of boats since the age of 15, some 71 years. The two sons, aged 50 and 55 had assisted in the boats on numerous occasions since they were aged 15; all three had worked together on many occasions over the past 35 to 40 years, from which it can be said that their cumulative experience was considerable.

5. **Suddenness of the casualty**

No survivors or remains were found during or after the search, therefore, it is presumed that the casualty occurred so quickly that none of the crew had time to don lifejackets. As the vessel had to proceed in relatively rough waters to retrieve the nets, it would have been prudent for them to have worn either lifejackets or any other form of a Personal Floatation Device (PFD).

6. **Life-saving appliances**

The Small Fishing Vessel Inspection Regulations are made pursuant to the Canada Shipping Act and, although the "NATALIE" was not subject to inspection, she was required to comply with the Regulations and Section 30 of the regulation sub-titled Lifesaving Equipment states:

> Every fishing vessel of open construction not exceeding 12.2 m in length shall carry:

(a) one approved lifejacket for each person on board; and

(b) one approved lifebuoy fitted with 27 m of line.

The "NATALIE" reportedly carried four or five approved lifejackets which were stowed in the wheel-house; it is not known whether she carried a lifebuoy. She also carried an undetermined number and type of distress signals (flares) stowed in the wheel-house. The life-jackets were not found and were reportedly securely stowed, it is possible that they sank while still secured to heavier parts of the boat. No lifebuoy was found.

7. Wreckage

The several pieces of wreckage which were found during the search were positively identified by the families and by fishermen who were familiar with the "NATALIE" to be parts of the vessel's structure; the identification was made through comparing the three different colours of the boat's hull, wheel-house and floorboards with the colours of the wreckage. Except for the floorboards, the wreckage was in small pieces of some 0.5 m to 1 m in length, which indicates that the vessel had broken up.

Among the wreckage was an oar which was positively identified as belonging to the "NATALIE", and a life-jacket which could not be positively identified and was of a different type to those described as belonging to the "NATALIE".

8. Time and position of the casualty

During the following day, November 22, the nets were found to be still set, therefore, it appears that the casualty occurred at a time before the "NATALIE" had reached them and started to haul. Turbulence of water would be met after the boat had passed from the shelter provided by the inner harbour; i.e., between Soi Pt. and Long Island; greater turbulence would be met after the boat had passed the relative shelter of Taylor Island, Flemming Island and the numerous small islands and shoals to the south.

Parts of the boat's floor-boards were found washed up on Flemming Island and the tide had been ebbing since 0725. The "NATALIE" left Middle Village at 0830, therefore, it is concluded that the casualty occurred in a position to

the north or north-west of Flemming Island at approximately 0845, November 21, enroute to the position of the nets and while attempting to gauge the sea conditions in the area of the nets.

9. Tidal action

High water occurred at 0725 that morning with a fall of tide to the next low water of approximately 2 m; the tidal streams produced (currents) tend to follow the coast in that area, consequently the ebb tide would flow in a south-easterly direction, reportedly at a rate of approximately 1.0 knot. Local knowledge indicates that when the wind is blowing in southerly directions (off the land) then the current flows in a more southerly direction.

It is considered that the casualty occurred at or near the entrance to the harbour at approximately 0845, some 1 hour, 20 minutes after high water, and the wind, though light at 5 knots, was blowing in a west-south-west direction; consequently, at the time of the casualty the general direction of the current would have been more to the south at a rate of 1 knot and out towards the sea.

The first search was started by other fishermen at approximately 1400 consequently 5.25 hours had elapsed from the time of the casualty which would have allowed a drift of some miles out into the Atlantic Ocean.

The wreckage was found distributed over a wide area, some on the shores of Flemming Island at the harbour entrance and some as far out to sea as 5 miles.

10. Cause of the Casualty

In the absence of testimony from any of the persons directly involved in the casualty and in the absence of the boat, other than small pieces of identifiable wreckage, the cause or causes of the casualty cannot be determined; consequently, there follows a list of probable causes determined from interviews with persons who were able to assist in the inquiry.

When approaching the entrance to the harbour:

- the boat ventured into rough seas which were beyond her structural capability to withstand;

- having encountered rough seas, the boat swamped while

attempting to turn and return to the inner harbour;

- the engine failed either from mechanical reasons or due to swamping;

- the steering gear failed and attempts to steer with an oar were unsuccessful allowing the boat to swamp and or drift onto rocks.

Other causes could be related to attempts to rescue a person who had fallen overboard or misjudgment in navigation causing the striking of rocks.

11. Survival time

A Canadian Red Cross Society pamphlet entitled 'Cold Water Survival' graphically illustrates the survival time for adult persons who are wearing standard lifejackets, are lightly clad and holding still in ocean water. With a seawater temperature of 7°C which was prevalent at the time of the casualty, such persons have a strong possibility of survival if rescued within 50 minutes. Between 50 minutes and 2 hours of immersion, the persons will become weak and unable to help themselves. After 2 hours death will occur.

The air temperature was 6°C. Taking into consideration that:

- the seas in the vicinity of the casualty were estimated to be steep and confused reaching heights of upto 2 m, and

- all three crew members were non swimmers, heavily clad in winter clothing and boots and were not wearing lifejackets or any other form of PFD,

it is highly unlikely that they would have remained afloat for any significant period of time and consequently their survival time would have been minimal.

12. Radio

The "NATALIE" did not carry a radio nor was she required to by Regulation. The casualty appears to have occurred quickly; however, had she been equipped with radio, it might have been possible to have transmitted a distress signal which in turn would have alerted other fishermen and the CCG.

13. Weather forecasts

A storm causing easterly to south-easterly winds of 30 to 40 knots had passed through the area during Friday, November 20, and at 1700 that day a marine forecast for the area issued by Environment Canada for Saturday, November 21, and Sunday, November 22, read as follows:

> Gale warning continued.
> Winds east 20 to gales 35 knots increasing to east winds 30 to gales 45 early this evening. Gales diminishing to westerly winds 15 to 25 overnight. Winds increasing to northwest winds 25 to gales 35 Saturday evening. Rain and mist ending this evening. Flurries developing on Saturday. Visibility near one in precipitation and mist. Temperatures near 8 tonight and near 3 on Saturday. Outlook for Sunday ... gale force northwesterlies.

It is not known if weather forecasts were obtained by the crew of the "NATALIE" but, even without a marine radio, marine forecasts can be obtained on a continuing basis on the local commercial radio stations, or by telephone or television and it was apparently their routine to obtain forecasts.

Furthermore, as a service to the general public, Environment Canada, through their 'Weatheradio' station operating on the frequencies of 162.55 MHz, 162.40 MHz and 162.475 MHz in the VHF-FM Band, provides a continuous broadcast of the general weather information. Additionally, in the maritime communities across Canada, these 'Weatheradio' stations also broadcast marine weather information to meet the specific needs of fishermen. Information pertaining to this service by Environment Canada can be obtained from their regional offices at no cost.

It is known that concern was felt about the sea-conditions outside of the harbour, hence the telephone call to the cousin and the conversation prior to departure.

14. Motivation

The lobster fishing season was due to open 1 week later; the gill nets were still set and possibly damaged by the Friday storm, gale force winds were forecast for

Saturday evening and Sunday which added the possibility of further damage to the nets and the weather in the harbour on Saturday morning was calm.

It is not known why the decision was made to take the boat out to the entrance in order to gauge the seas from there when the state of the sea could be ascertained by viewing from the land, but it is known that there was limited time available for the two sons to assist and it is possible that anxiety over the nets led to an attempt to retrieve them before the gales forecast for Saturday evening/Sunday occurred, leading to the boat venturing too far into rough seas.

15. SAR

The Rescue Co-ordination Centre (RCC) at Halifax, Nova Scotia was advised by Halifax Coast Guard Radio Station at 1422 that the "NATALIE" was overdue; they tasked the Canadian Coast Guard Ship (CCGS) "SAMBRO" at 1425 which was secured at her berth at Sambro some 12 miles distant by sea from West Dover. The "SAMBRO" departed her berth at 1435 and arrived on-scene at 1610 where she started to search. At 1710 she had found an oar and some pieces of wreckage which were identified as belonging to the "NATALIE". The CCGS "MARY HITCHENS" was also tasked at 1745.

The following is a breakdown of CCG rescue resources deployed:

Name	Type	Tasked	Departed	On Scene
"SAMBRO"	CCGS	21/1425	21/1435	21/1610
"MARY HITCHENS"	CCGS	21/1745	21/1817	21/2025

In addition to the two CCG ships, several local fishing vessels continued with the search that they had initiated at 1330, September 21, and worked in conjunction with the CCG ships. Sunset occurred at 2040 that day and the search continued through the night with several more pieces of wreckage being found. The weather continued to be overcast and the search was hampered by snow flurries, westerly winds of 30 to 35 knots and rough seas.

The weather conditions had improved by Sunday morning, November 22 and the following Department of National Defence aircraft were tasked.

Type	Tasked	Departed	On Scene
Tracker Aircraft	22/0850	22/0859	22/0904
Labrador Helicopter	21/1950	22/0841	22/1015

A Canadian Air Search and Rescue Association (CASARA) Cesna 172 aircraft was tasked at 1211 on November 22.

The search continued until sunset on Monday, November 23 but without success except for finding additional wreckage.

Findings

Whilst en route and with the intent to retrieve a fishing net located at the entrance to Port Dover Harbour, N.S., the small Canadian fishing vessel "NATALIE" sank during the morning of November 21, 1987 with the loss of three crew members.

In the absence of testimony from any witnesses to the casualty and in the absence of significant pieces of wreckage, the precise causes cannot be ascertained; however, it would appear that the following are the most probable:

- the limited fishing time available to the younger victims in conjunction with the past and forecast weather conditions, increased the need to retrieve the nets;

- seas were still rough, and the boat was overwhelmed whilst attempting to gauge the sea conditions; and

- the overwhelming was swift.

The victims lost their lives to the following contributing factors:

- they were non-swimmers; and

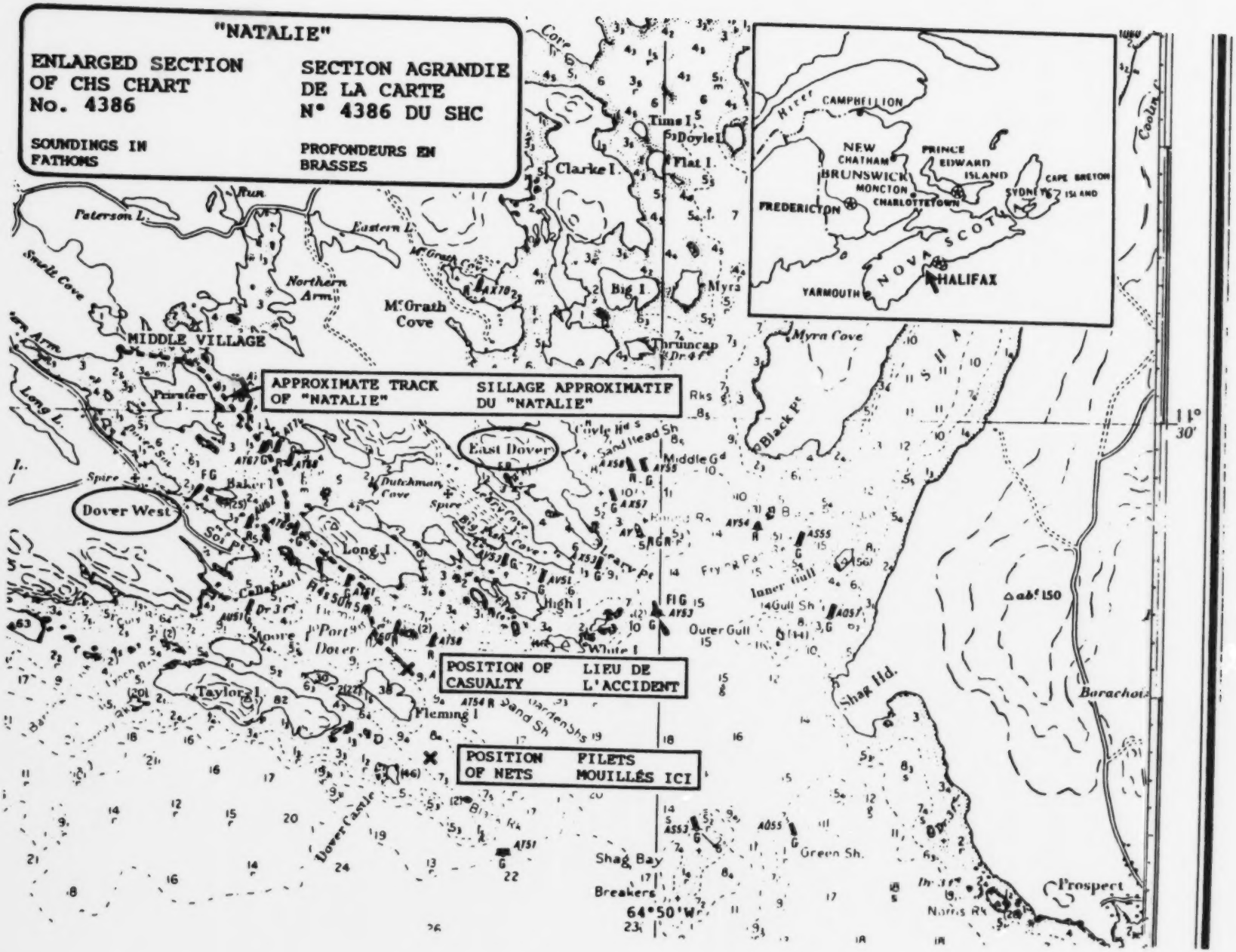
- they were not wearing exposure suits, or lifejackets, or any form of PFD.

Other Findings

Gale warnings were still in effect and no other local boats intended to fish that day because of the sea conditions.

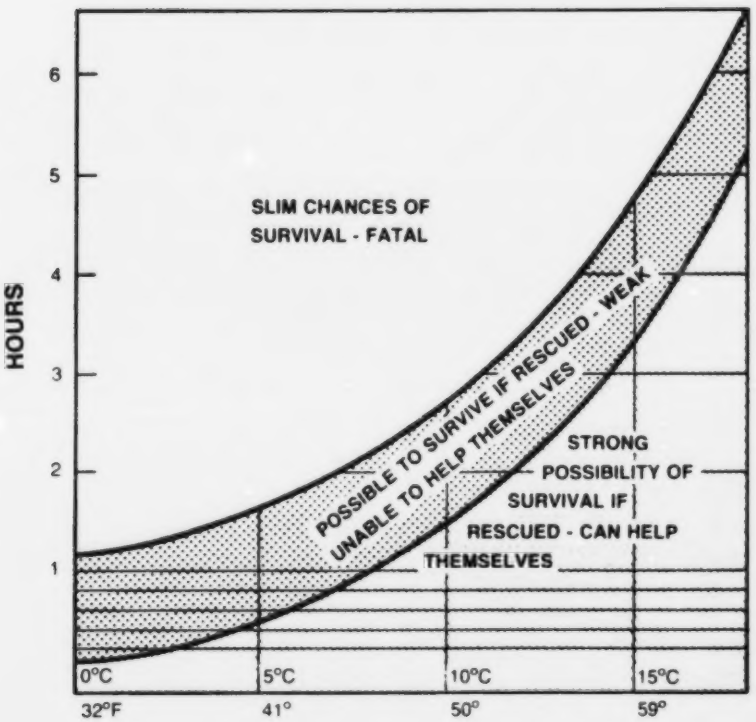
The vessel carried no radiotelephone, the use of which may have alerted authorities to the distress.

OTTAWA, ONTARIO
JUNE 1988.


"NATALIE"
ENLARGED SECTION OF CHS CHART No. 4386
SECTION AGRANDIE DE LA CARTE N° 4386 DU SHC
SOUNDINGS IN FATHOMS
PROFONDEURS EN BRASSES
APPROXIMATE TRACK OF "NATALIE"
SILLAGE APPROXIMATIF DU "NATALIE"
POSITION OF CASUALTY
LIEU DE L'ACCIDENT
POSITION OF NETS
PILETS MOUILLÉS ICI
MIDDLE VILLAGE
Dover West
East Dover
Clarke I.
Flat I.
Doyle I.
Time I.
Big I.
Myra
McGrath Cove
Northern Arm
Eastern L.
Paterson L.
Long I.
High I.
Taylor I.
Fleming I.
White I.
Outer Gull
Inner Gull
Shag Bay
Breakers
Green Sh.
Prospect
Myra Cove
Black Pt.
Shag Hd.
Borachois
64°50'W
44°30'
CAMPBELLTON
NEW BRUNSWICK
CHATHAM
MONCTON
FREDERICTON
PRINCE EDWARD ISLAND
CHARLOTTETOWN
SYDNEY
CAPE BRETON ISLAND
NOVA SCOTIA
HALIFAX
YARMOUTH

ANNEX I

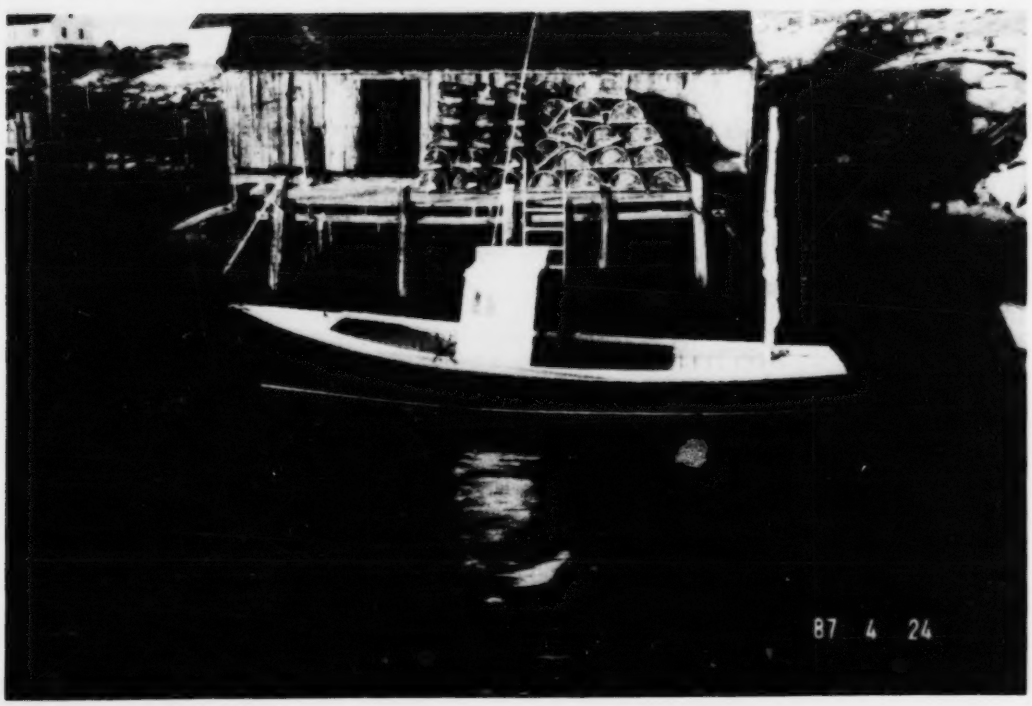
COLD WATER SURVIVAL



The accompanying graph shows average predicted survival times of average, adult humans in water of different temperatures. The figures are based on experimental cooling of average men and women who were holding still in ocean water and wearing a standard lifejacket and light clothing. The graph shows, for example, that predicted survival time is about 2½-3 hours in water of 10°C (50°F). Predicted survival time is increased by extra body fat and decreased by small body size. Although women generally possess slightly more fat than men they cool slightly faster due to their usually small body size. However, for comparable sizes, the man will cool faster.

"COLD WATER SURVIVAL"
CANADIAN RED CROSS

Fishing vessel "NATALIE".
Bateau de pêche "NATALIE".



Fishing vessel similar to the "NATALIE".
Bateau de pêche semblable au "NATALIE".

View of area from East Dover.
Secteur vu de East Dover.

Parts of wreckage.
Morceaux des débris.